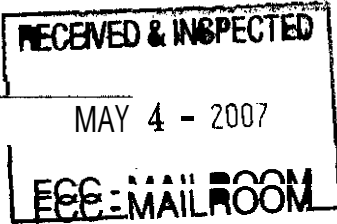


***Rural Healthcare Pilot Program***



**Subject:** Rural Healthcare Pilot Program

**Ref:** FCC docket number for this pilot program (WC Docket No. 02-60)

**Entity:** Albemarle Health

1144 North Road Street  
Elizabeth City, North Carolina 27909

**Key Contact:** Stephen W. Clark, Chief Information Officer

**Phone:** 252-384-4575

**E-Mail:** sclark@albemarlehealth.org

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***From Albemarle Health***

## ***Rural Healthcare Pilot Program***

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**Ref:** FCC docket number for this pilot program (WC Docket No. 02-60)

### **Identify the organization that will be legally and financially responsible**

**Entity:** Albemarle Health  
1144 North Road Street  
Elizabeth City, North Carolina 27909

**Key Contact:** Stephen W. Clark, Chief Information Officer  
**Phone:** 252-384-4575

**Signature of Person Authorized to Apply:** 

**Background:** Once a rural, 35-bed hospital started in 1914, today Albemarle Hospital is a 182-bed regional, not-for-profit, community hospital. Over the past 10 years, the hospital evolved from a typical community hospital to become the region's center of medical excellence – serving seven counties and more than 130,000 people. It is a remarkable saga from a once “perceived limited medical facility with limited services and coping with the constraints imposed by its rural location and low population density in a large geographic area to a modern medical center offering primary, community, and specialty services, and has the technology to provide tertiary services in a rural setting.

The hospital, as an economic driver, serves seven counties; generates over \$100 million in annual net revenue, employs approximately 1,100 people with over \$50 million in annual payroll; spends \$3.2 million annually on local vendor purchases; and provides \$12 million annually in true charity care to the people of our region.

While traditional copper-based networks (frame relay) have been available in the seven county service area for quite some time, they are expensive to implement and maintain, difficult to manage, and not suited for the transference of medical images and other large data packets. Also, the wide spread use of Internet broadband (DSL and cable) has limitations and is not universally available throughout the seven county service area. Most (if not all) healthcare providers (being solo practitioners or small group practices) do not have the information technology support and engineering to architect a network suitable for today's high-bandwidth requirements. Physician focus on computer networks is limited with little knowledge of broader connectivity issues and its bearing on the healthcare community as a whole.

### **Goals and objectives of the proposed network**

The goal of the initiative is to provide high speed band width to healthcare providers and other health agencies in the seven county service area to enable access to and transference of health data and electronic images. The ***Albemarle Health Network Telemedicine Initiative*** can provide services more efficiently and effectively than would be possible by any one organization by:

## ***Rural Healthcare Pilot Program***

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**Goal 1** – Leverage the technically advanced IT infrastructure of Albemarle Health to provide regional connectivity to the at-large healthcare community.

**Goal 2** – Provide technical services and IT leadership for the design, support, and maintenance needed by the at-large healthcare community.

**Goal 3** – Provide secured Health Information Exchange (HIE) connectivity (via the Internet and other private networks) enabling healthcare providers to exchange patient health information in support of:

- Electronic Health Records (EHR)
- Telemedicine technologies that offer speed to delivery, anytime, anywhere to enable clinical decision-making; and
- Computerized Physician Order Entry (CPOE) to minimize handwriting and other communication errors by having physicians and other providers enter orders into a computer system include orders for x-rays and other diagnostic procedures, referrals, discharges, and transfers and may also may be linked to a patient's EHR.

**Estimate the network's total costs for each year**

Budget Categories	Year 1		Year 2		Year 3		
	FCC	AHMSO	FCC	AHMSO	FCC	AHMSO	
PERSONNEL	\$ 252,250	\$ 31,750	\$ 187,450	\$ 96,010	\$ -	\$ 178,510	
EQUIPMENT	\$ 564,000	\$ -	\$ -	\$ -	\$ -	\$ -	
SUPPLIES	\$ 7,200	\$ 12,500	\$ 7,200	\$ 3,500	\$ -	\$ 10,700	
OTHER	\$ 207,488	\$ 12,000	\$ 357,488	\$ 12,000	\$ -	\$ 19,488	
CONTRACTURAL	\$ -	\$ 17,500	\$ -	\$ 35,000	\$ -	\$ 37,500	
Totals	\$ 1,030,938	\$ 73,750	\$ 552,138	\$ 146,510	\$ -	\$ 246,198	\$ 2,049,534

**How for-profit network participants will pay their fair share of the network costs**

Three means of financing the post build-out:

1. In-kind funding from the Albemarle Health organization,
2. Grant funding, and
3. Revenues from subscription fees from the for-profit provider network.

The for-profit provider network will generate revenues by substituting their current ISP costs for a service with greater broadband speed and telemedicine capabilities, plus value-add services of network engineering and support solely for the benefit of a regional healthcare network. While the cost to providers may be more than their current ISP rates, the premium paid will be substantially less than what a single provider (or practice) could pay to provide the engineering support and maintenance services.

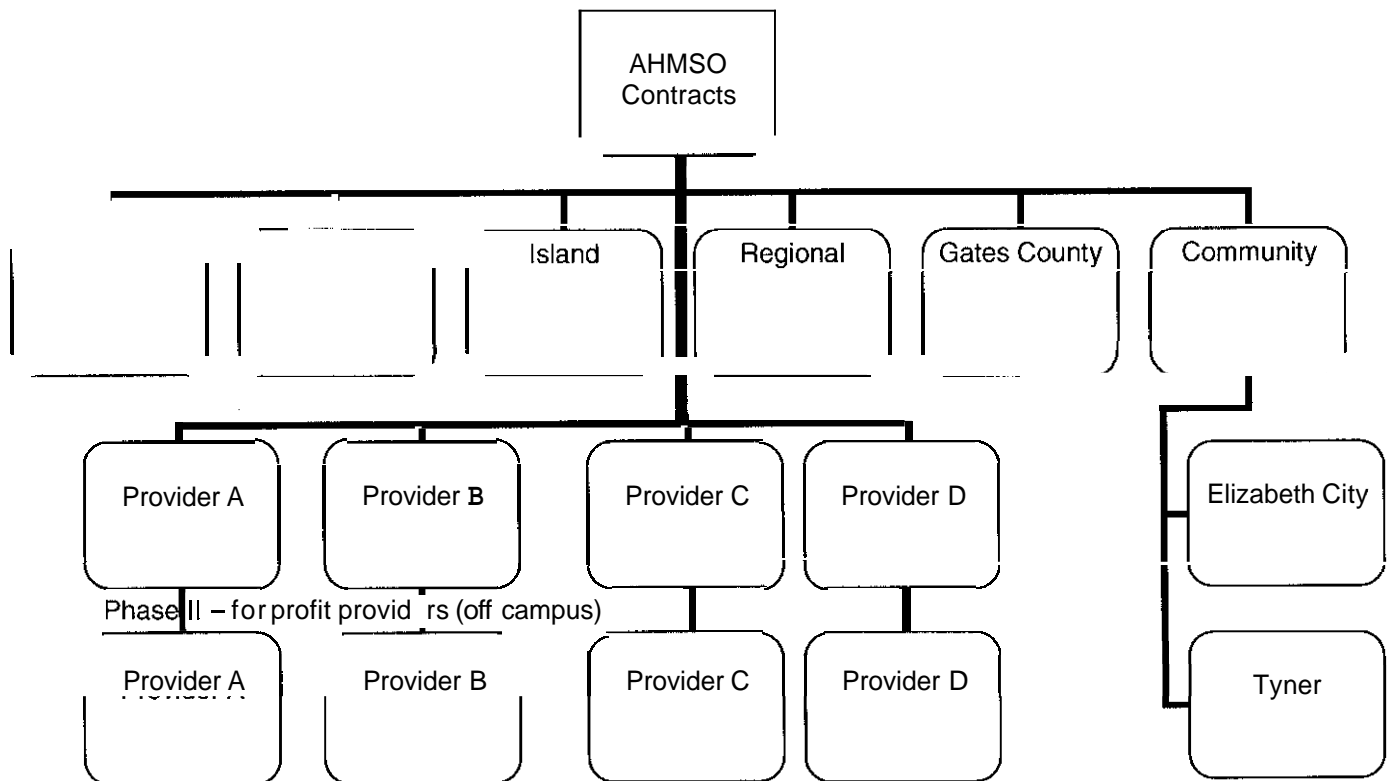


## ***Rural Healthcare Pilot Program***

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### **Sources of financial support and anticipated revenues that will pay for costs not covered by the fund**

The primary issues preventing rural telemedicine expansion are lack of strategic IT awareness, lack of coordinated infrastructure planning & engineering, and a poor business model to sustain the network. The vision is to create a medical services organization to support regional healthcare providers and other healthcare agencies in the region. The applicant, Albemarle Health, will create an MSO – The Albemarle Health Medical Services Organization (AHMSO). AHMSO will represent a network of Albemarle Health facilities and primary care providers and specialists (approximately 55 practices and over 160 physicians) throughout the seven county service area. Some of the operating expenses of the MSO will be covered by revenues from subscription fees from the for-profit provider network.



The AHMSO will be responsible for the overall coordination and direction of the rural IT/Telemedicine system through a two phase build out. It will be staffed by IT specialists who have experience in successful project management, network design and deployment so implementation will be able to address complexity for multi-systems integration throughout the region. The IT specialists will have the expertise needed to effectively test and analyze interface capabilities, and to thoroughly evaluate implementation readiness.

## ***Rural Healthcare Pilot Program***

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### **AHMSO project management will fine-tune system integration by:**

- Identifying system dependencies and developing project plans
- Planning for resources and implementation needs
- Developing interface requirements and specifications
- Managing technical staff and analysts to ensure project timelines are followed
- Analyzing and troubleshooting the original and/or newly created interfaces in preparation for system integration
- Identifying, reporting and helping resolve integration issues
- Developing effective 'Change Management' procedures

Sample expenses for a MSO site include:

- Program administrator salary;
- Technician salary;
- Scheduler/administrative assistant salary;
- Office rent;
- Office equipment (computers, furniture, etc.);
- Copies, mailing, fax, other office supplies;
- Miscellaneous telemedicine supplies;
- Telecommunication line charges;
- Telemedicine equipment;
- Equipment maintenance;
- Equipment upgrade.

It goes without saying that securing funds to pay for these numerous expenses is an incredible challenge. That is why considerable time must be spent in identification of MSO expenses and revenue sources.

Internal funding from the Albemarle Health organization and grant funds will be the big contributors during initial implementation phase. Afterwards:

- A portion of revenue will come with a better understanding of Congress's omnibus appropriations bill (H.R. 5661) which dramatically revised Medicare rules for reimbursement for telemedicine; and from
- For-profit providers by substituting their current IPO costs for a service with greater broadband speed and telemedicine capabilities more secured networking and expanded administrative IT efficiencies.

### **List the healthcare facilities that will be included in the network**

#### **Not-for-profit Facilities**

##### **Phase I – Albemarle Health**

Albemarle Hospital  
Regional Medical Center –  
Outer Banks  
■ North Beach/ Dare Community  
Care Clinic (CCC)  
Regional Oncology Center  
Island Medical Center  
• IMD/Dare CCC  
Buxton/Dare CCC

Gates County Medical Center  
Albemarle Hospital Foundation –  
Community Care Clinics (CCC)  
• Elizabeth City Clinic  
• Tyner Clinic  
Wesley House  
Currituck Medical Office  
Building (MOB)  
Moyock MOB

## ***Rural Healthcare Pilot Program***

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### For-Profit Facilities

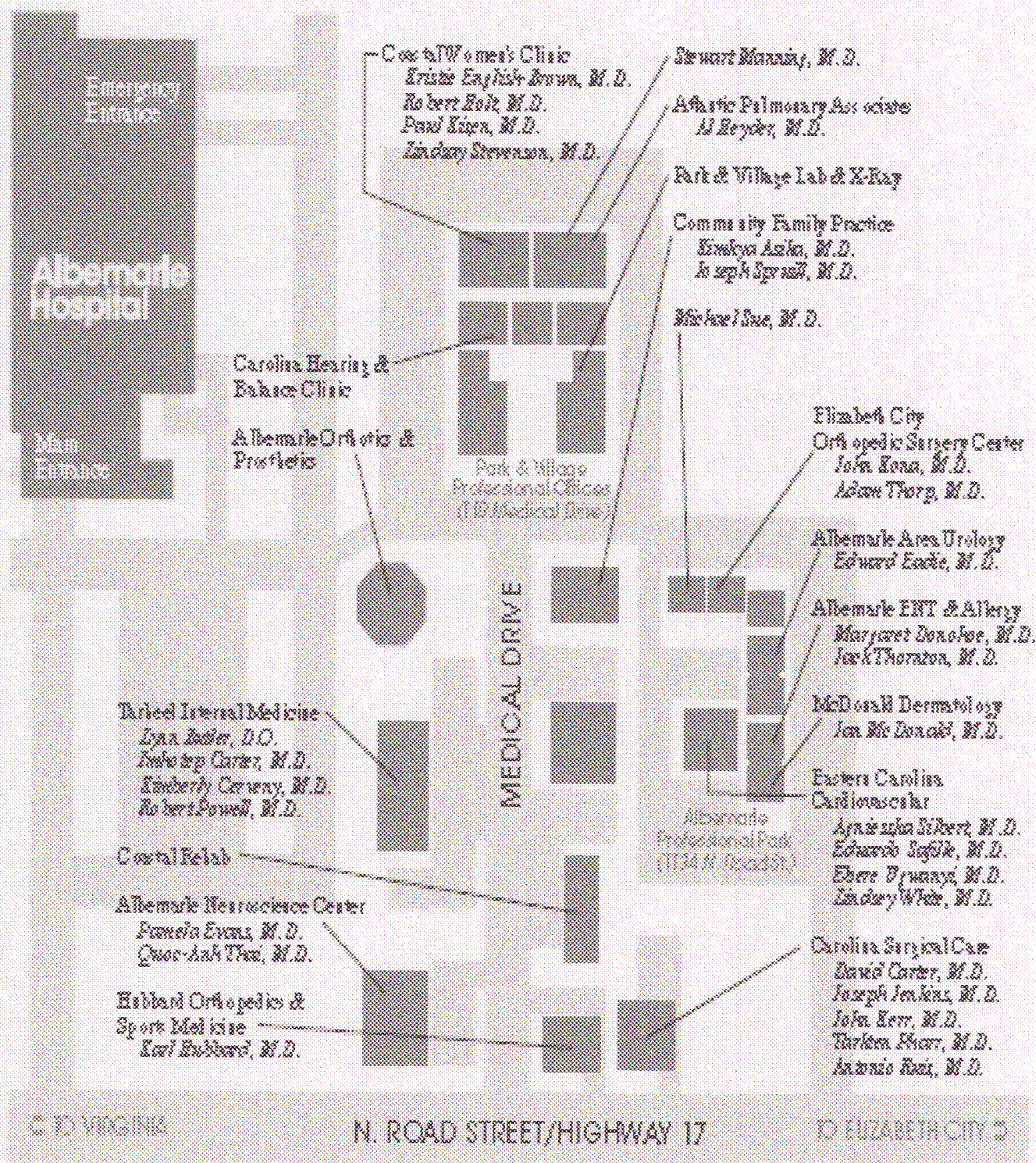
Phase I – There are 23 for-profit practice groups whose offices are on a

Albemarle Health Not-For-Profit Facilities	Phone	RUCA	
		POPCATS	RUCS 2_NC
Albemarle Hospital 1144 North Road Street	(252) 335-0531	1	4
Regional Medical Center – Outer Banks 5200 North Croatan Hwy Kitty Hawk, NC 27949	(252) 255-6000	5	4
Island Medical Center 715 North Main Hwy #64	(252)-473-2500	4	5
Regional Oncology Center 1144A N. Road Street Elizabeth City, NC 27909	(252)-338-4122	1	4
Gates County Medical Center 501 Main Street	(252)-357-2167	5	10.4
CCC in Elizabeth City 501 Catalina Avenue Elizabeth City, NC 27909	(252)-384-4733	1	4
CCC in Tyner 2869 Virginia Road Tyner, NC 27980	(252)-221-4901	5	8



## Rural Healthcare Pilot Program

Aerial Schematic of Albemarle Hospital and  
For-Profit Provider Campus in Elizabeth City, NC





## ***Rural Healthcare Pilot Program***

Phase I – For Profit Facilities: There are 23 for-profit practice groups with 87 practicing physicians whose offices are on a campus adjacent to the hospital in Elizabeth City, NC.

Practice Groups in Elizabeth City, NC <i>On the Hospital Campus</i>	Address	ZIP	Phone	RUCA	
				POPCATS	RUCS 2
Albemarle Acupuncture	100 Medical Drive	27909	252-340-4736	1	4
Albemarle Counseling Group	1141 North Road Street, suite B	27909	919-335-2018	1	4
Albemarle ENT, Asthma & Allergy	1134 North Road Street, Bldg. #3	27909	252-335-2923	1	4
Albemarle Hospital Heart Failure Clinic	1144 N. Road Street	27909	252-384-4133	1	4
Albemarle Neurology, P.A.	100 Medical Drive	27909	252-331-1188	1	4
Albemarle Radiology	1144 North Road Street	27909	252-384-4615	1	4
Albemarle Reg. Oncology Center	1144-A N. Road Street	27909	252-384-4122	1	4
Anesthesia Services of Albemarle	1144 N. Road Street	27906-1587	252-384-4002	1	4
Atlantic Pulmonary Associates	111-A Medical Drive	27909	252-331-1506	1	4
Carolina Surgical Care	1138 North Road Street	27909	252-335-4890	1	4
Coastal Womens Clinic, LTD	112 Medical Drive	27909	252-449-5696	1	4
Community Family Practice	107 Medical Drive	27909	252-335-0503	1	4
E. Carolina Univ. Psychiatry Clinic	110 Medical Drive	27909	252-335-1131	1	4
E. Carolina Cardiovascular, PA	1134 North Road Street Bldg. 9	27909	252-331-1100	1	4
EC Orthopedic Surgery Center	1134 North Road Street, Suite 7	27909	252-338-3993	1	4
Emergency Medicine Physicians	1144 N. Road Street	27909	252-384-4449	1	4
Hubbard Orthopaedics/Sports Medicine	1140 North Road Street, Suite 1	27909	252-331-7000	1	4
McDonald Dermatology	1134 N. Road Street, Suite 2	27909	252-331-5869	1	4
Pathology Associates of Eastern NC	P.O. Box 363	27909	252-338-8100	1	4
Peninsula Radiological Associates	1144 N. Road Street	27909	252-384-4615	1	4
Q.A. Thai Neurosurgery Center	Albemarle Neuroscience Center	27909	252-335-9900	1	4
Tarheel Internal Medicine Assoc., PA	102 Medical Drive	27909	252-338-4117	1	4
Women`s Urology	1141 N. Road Street Suite, 1	27909	252-331-1598	1	4



## Rural Healthcare Pilot Program

**Phase II – For Profit Facilities:** There are **32** for-profit practice groups with 81 practicing physicians whose offices are in the surrounding seven county service area.

Practice Groups in Elizabeth City, NC <i>Not on Hospital Campus</i>	Address	ZIP	Phone	RUCA	
				POPCATS	RUCS 2
Albemarle Allergy & Asthma	615 S. Hughes Blvd., Unit C	27909	252-338-0373	1	4
Albemarle Eye Care Cntr, LTD	1503 N. Road Street	27909	252-335-5446	1	4
Albemarle Family Practice	1141 North Road Street	27909	252-335-5424	1	4
Albemarle Gastroenterology Association	405 Hastings Lane	27909	252-335-5588	1	4
Albemarle Medical Associates	1507 N. Road Street	27909	252-335-2963	1	4
Albemarle Mental Health Center	P.O. Box 2367	27906-2367	252-335-4946	1	4
Albemarle Nephrology Associates	206 Hastings Road	27909	252-335-1083	1	4
Albemarle Psychological Services	301 E. Church Street	27907-0303	252-338-8821	1	4
Albemarle Pulmonary Medicine	1507 North Road Street, Suite 1	27909	252-338-6167	1	4
Albemarle Regional Health Services	711 Roanoke Avenue	27909	252-338-4400	1	4
Allen Eye Associates	504 East Elizabeth Street	27909	252-384-0929	1	4
Carolina Plastic Surgery Specialists	504 East Elizabeth Street	27909	252-384-0919	1	4
Coastal Eye Center	109 Jordan Plaza	27909	252-338-3909	1	4
Coastal Pediatrics	1141 North Road Street	27909	252-338-2155	1	4
Coastal Urology Associates	400 South Road Street, Suite D-1	27909	252-331-2388	1	4
Community Care Clinic	501 Catalina Ave.	27909	252-384-7433	1	4
Diabetes, Thyroid & Endocrinology Center	1121 North Road Street	27909	252-338-5184	1	4
Manuli Internal Medicine	1121 North Road Street, Suite A	27909	252-338-5183	1	4
Northeastern Family Medicine	206 S. Road Street	27909	252-335-2355	1	4
Northeastern Obstetrics/Gynecology	1141 North Road Street	27909	252-338-0101	1	4
River City Medical Center	1507 N. Road Street, Suite 2	27909	252-333-1149	1	4
Virginia Oncology Associates	110 Medical Drive, Suite 7	27909	252-331-2044	1	4
Women First	504 E. Elizabeth Street, Suite 5	27909	252-338-9080	1	4

Practice Groups <i>Outside of Elizabeth City, NC</i>	Address	ZIP	Phone	RUCA	
				POPCATS	RUCS 2
Albtuck Family Medical Care	4039 Caratoke Hwy Barco, NC	27917	252-453-3013	5	2
Edenton Eye Care	101 Mark Drive Edenton, NC	27932	252-482-7471	5	7
Edenton Urology Clinic	210 N Broad Street Edneton, NC	27932-1948	252-482-1606	5	7

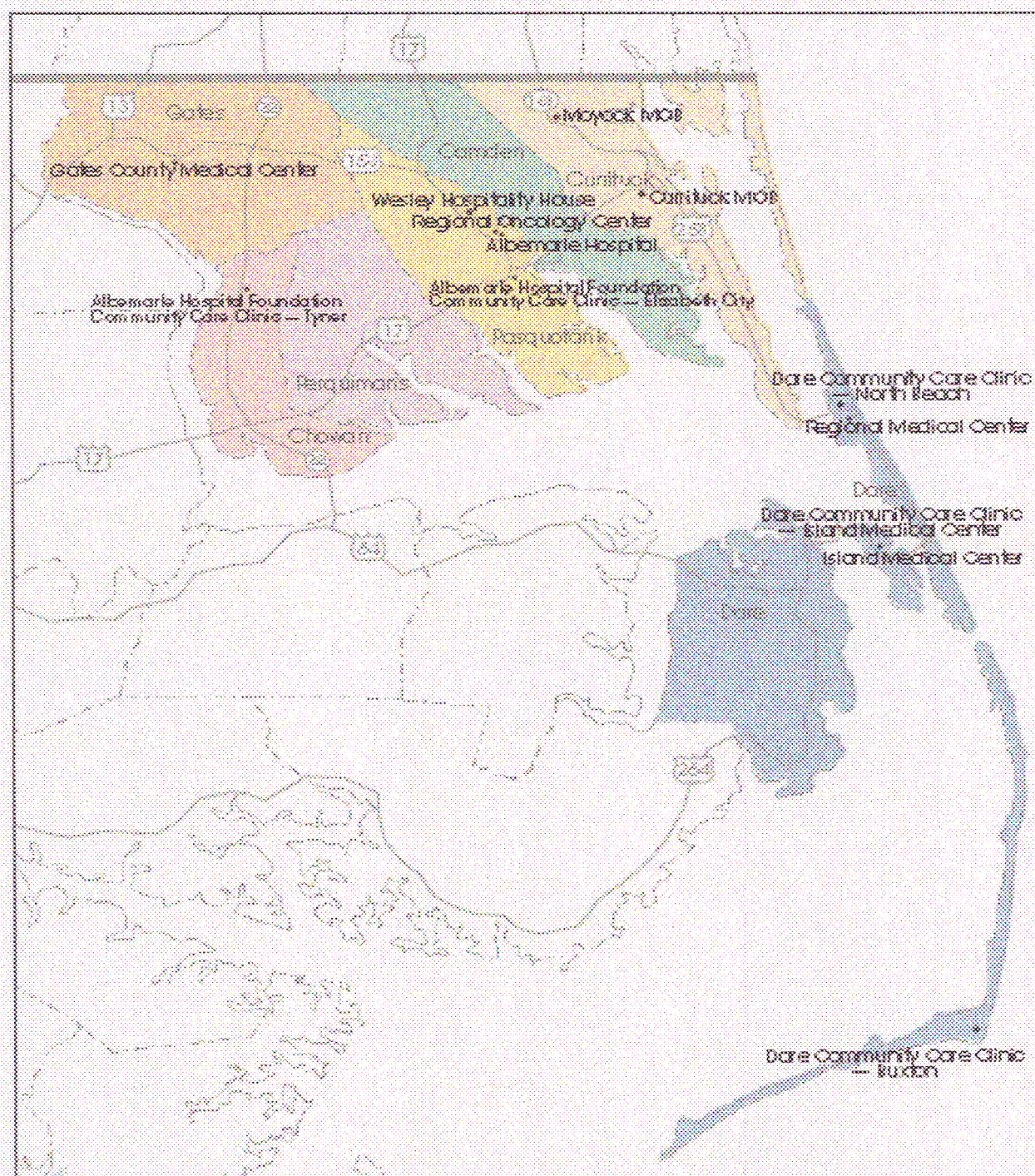
## Rural Healthcare Pilot Program

Practice Groups <i>Outside of Elizabeth City, NC</i>	Address	ZIP	Phone	RUCA	
				POPCATS	RUCS 2
First Flight Orthopaedics	4820 North Croatan Hwy Kitty Hawk, NC	27949	252-261-9940	5	4
Francis A. Bald & Assoc.	2224 Croatan Hwy Nags Head, NC	27959	252-441-4300	5	10.5
Perquimans Medical Center	9 Winfall, NC	27985	252-426-9172	1	10.5
Regional Medical Services	5200 North Croatan Hwy - Suite 4 & 6 Kitty Hawk, NC	27949	252-261-9050	5	4
Washington Medical Center	1052 US Highway 64E Plymouth, NC	27962	252-793-0117	5	7
Women's Health of Edenton, PC	309 N. Broad Street Edneton, NC	27932	252-482-7001	5	7

## Rural Healthcare Pilot Program

A regional map of the Albemarle Health not-for-profit facilities that will be included in the initial network build out – **Phase I** – is provided below.

### Proposed Regional Telemedicine/Broadband for Northeastern North Carolina





## ***Rural Healthcare Pilot Program***

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### **Previous experience in developing and managing telemedicine programs**

Albemarle Health has experience in **4** main areas of development and management of telemedicine programs:

- Improvements in infrastructure and application;
- Building a wireless environment;
- Point of service care; and
- Leading member of the **community healthcare connectivity initiative** addressing the healthcare discrepancies of an economically depressed, socially disenfranchised, and medically underserved.

**1) “Most Wired Hospital” Award (2003,2004, and 2005)** – Albemarle Health has been named one of the “25 Most Wired” Small and Rural Hospitals in the country three years in a row by Hospitals & Health Networks magazine. The Most Wired Survey and Benchmarking Study, was sent to hospitals that are members of the American Hospital Association, which represents more than 5,000 hospitals in the United States. The local fanfare was a great boost to public perception of quality.

Under the leadership of the Chief Information Officer, meeting this operational goal has helped the staff go wireless, allowing point-of-service care by:

- Updating medical records instantly;
- Bar coding medicines and patient identification wristbands to match the right medicines with the right patients at the right times;
- Making paper charts obsolete by scanning paper charts into computer system after a patient is discharged. This will relieve the heavy reliance on the library for “paper” records that take several hours to retrieve;
- Providing new work stations throughout the hospital; and
- Providing patient vital statistics to physician hand-held PDAs.

Significant investments have been made to both infrastructure and applications over the past five years:

- Deployment of Meditech in inpatient setting supporting,
- Inpatient Electronic Medical Records,
- Patient Document Imaging,
- General order entry/results reporting,
- Bedside Medication Verification (ID Patient Bracelets).
- Pharmacy,
- OR Management,
- ED automation,
- MD hand-held automation of patient vitals and test results,
- Pharmacy after-hour coverage (via 3<sup>rd</sup> party vendor);
- PACS Filmless Imaging (radiology),
- Teleradiology and diagnostic radiology services from Knight Hawk Radiology Services with state-of-the-art reading centers in Sydney, Australia and Zurich, Switzerland and staffed by U.S.-trained, board-certified radiologists specializing in emergency radiology, and
- Oncology treatment applications.

## ***Rural Healthcare Pilot Program***

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Albemarle Health has an on-going five year plan for IT investments both internally and to the external provider environment. Internally, the hospital is emphasizing patient safety and quality improvement in the clinical setting, such as, Digital Mammography, Cardiac Imaging (PACS), and Bedside Clinical Charting while promoting external broadband expansion to the provider community.

2) To address the healthcare discrepancies of an economically depressed, socially disenfranchised, and medically underserved region, Albemarle Hospital is a leading member of the **community healthcare connectivity initiative**. Other members of the network consortium are the Albemarle Hospital Foundation (AHF), Albemarle Regional Health Services and Albemarle Mental Health Centers.

The proposed **community healthcare connectivity initiative** is part of a larger program effort. Albemarle Hospital is a team participant in the Rural American Healthcare Consortium (RAHC), with the mission of providing a national model that addresses the challenges for rural, underserved, and under-resourced areas. The RAHC effort is proposing prototype national health information network architecture. This is a direct response to the President's vision of national electronic health records within the next decade. This approach makes rural healthcare network access affordable. It is transformational, which is the shifting of operational costs of information technology through a shared services cost structure; distributed to all network participants. This response is an affordable and user friendly, fully integrated community network application that can help overcome:

- Distance,
- Lack of communication infrastructure,
- Budgetary constraints,
- Non-existent or antiquated legacy systems,
- Geographically separated specialists and facilities, and
- Multi ethnic disparities.

To keep pace with the work being accomplished by the RAHC, Albemarle Hospital has worked with the AHF to create its own **community healthcare connectivity initiative** – now in its first year of implementation. Initial collaborative efforts are in-kind support between Albemarle Hospital, the AHF and their network solutions partners SabiaNet/SciHealth and SabiaMed. The initial development is for a secured, integrated web information technology solution between AHF's Community Care Clinics (CCCs) and the data integration linkage desired with Albemarle Hospital. Within the first year – started in 2006 and completed by December, 2007 – the initiative will begin to break down barriers by tracking, measuring and monitoring outcomes for the

## ***Rural Healthcare Pilot Program***

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expanding chronically ill patient base by:

- Relieving delays by improving delivery of care;
- Overcoming any perceived lack of organizational efficiencies in community care settings to encourage patient participation and lower apprehensions of at-risk populations who typically avoid early interventions;
- Providing more comprehensive intake coordination and coordinated case management tools;
- Providing well prepared electronic patient records on state-of-the-art secured information technology networks;
- Attracting more volunteer healthcare professionals by promoting practical, user friendly information technology tools that assist them in streamlining their on-site clinical time while seeing patients at the CCCs; and
- Forecasting trends with decision support information through tracking tools on race, ethnicity, gender, chronic illnesses, utilization patterns, etc.

The implementation of the **community healthcare connectivity initiative** is in three phases; Phase I and II are being funded with \$198,000 by the FY 2007 NC General Assembly with non-recurring funds for rural use on pilot demonstration projects. Phase III will occur in the subsequent three years; and future funding for this phase will advance the networking with regional, county, local healthcare entities and social services agencies.

The stakeholders listed below are members of the connectivity initiative.

Partners	Current Role	Stakeholders roles and responsibilities
Albemarle Hospital	Regional 182 bed hospital, located in the extreme northeast, bordered by four counties without hospitals.	Providing information technology access to and from the CCCs, using several technologies described in Section 2c.
Albemarle Hospital Foundation	Regional provider of primary care for medically indigent, uninsured and underinsured adults	Responsible for the day-to-day operations and budget control with full authority to administer the project. As the main liaison with individual network members, this position is responsible for accomplishment of the project goals and objectives.
Albemarle Regional Health Services	Regional public health department	Stakeholder and future network partner
Albemarle Mental Health Center	Regional provider of outpatient mental health and substance abuse services	Stakeholder and future network partner
Non-network member(s)*	Leader of Non-Network Member(s): Marilyn Ehrhardt President and CEO Sabianet Inc	Contract implementation, consulting and solutions provider



## Rural Healthcare Pilot Program

Provide a project management plan outlining the project's leadership and management structure, as well as its work plan, schedule, and budget

Goal	Objectives	Key action steps for each objective	Responsible entity (person, committees, etc.)	Schedule	Cost by objective
Initiating phase	Form governance and project structures	Form steering committee	CIO	3Q2007	In kind by Albemarle Health
		Appoint project manager	CIO	3Q2007	In kind by Albemarle Health
		Develop Project Charter & Business Case documents	Project Manager	3Q2007	\$8,800
		Enlist Stakeholders	Project Manager	3Q2007	\$8,800
		Form MSO	Administration Legal Counsel	4Q2007	In kind by Albemarle Health
		Develop Financial & Sustainability Model	Steering Committee	4Q2007	In kind by Albemarle Health
		Develop Marketing Plan	Steering Committee	4Q2007	In kind by Albemarle Health
Planning phase	Detailed planning, resource people, finances, and operational models.	Prepare detail implementation plan	Project Manager	4Q2007	\$8,800
		Conduct project risk assessment and mitigation strategies	Project Manager	4Q2007	\$8,800
		Staff Project Team	Project Manager	4Q2007	\$8,800
		Prepare detailed network	Network Engineer	1Q2008	\$12,000

## Rural Healthcare Pilot Program

Goal	Objectives	Key action steps for each objective	Responsible entity (person, committees, etc.)	Schedule	Cost by objective
Implementation phase		engineering specifications			
		Establish infrastructure standards	Network Engineer	1Q2008	\$12,000
		Develop service level agreements & contracts	Project Manager	1Q2008	\$8,800
		Initiate Marketing Campaign	Project Manager	1Q2008	\$8,800
		Complete vendor negotiations	Project Manager	1Q2008	\$4,400
	Build Core Infrastructure	Upgrade network core switches	CTO Network Engineer	1Q2008	\$100,000
		Install Network security & monitoring tools	CTO Network Engineer	1Q2008 – 2Q2008	\$200,000
		Engineer & update firewall configuration (DMZ)	CTO Network Engineer	1Q2008	\$50,000
	Build Phase 1 Infrastructure	Conduct Site Assessment Survey for each Phase I entity	Network Engineer	2Q2008	\$4,000
		Purchase equipment	Project Manager	2Q2008	\$4,400
		Order & install network circuits	Network Engineer	2Q2008	\$4,000
		Install & test network equipment	Network Engineer	2Q2008	\$8,000
		Performance testing & optimization	Network Engineer	2Q2008	\$8,000
	Build Network Bridges to key Regional Health Partners	Establish private circuits with UNC, UHS (Pitt County), Sentara, and others.	Project Manager Network Engineer	3Q2008 – 4Q2008	\$8,400
	Build Phase 2 Infrastructure	Conduct Site Assessment Survey for each Phase 2 entity	Network Engineer	3Q2008	\$4,000

## ***Rural Healthcare Pilot Program***

<b>Goal</b>	<b>Objectives</b>	<b>Key action steps for each objective</b>	<b>Responsible entity (person, committees, etc.)</b>	<b>Schedule</b>	<b>Cost by objective</b>
		Purchase equipment	Network Engineer	4Q2008	\$4,400
		Order network circuits equipment	Network Engineer	4Q2008	\$4,000
		Install & test network	Network Engineer	4Q2008	\$8,000
		Performance testing & optimization	Network Engineer	4Q2008	\$8,000
Operational phase	Fulfillment	Monitor network/stabilization	Network Engineer	3Q2008 – 1Q2009	\$18,000
		Perform assessment for access to applications, data sources & medical images	Project Manager	1Q2008	\$13,200
		Data exchange utility for interoperability of health data	Project Manager	1Q2008 – 2Q2008	\$350,000
		Access to existing applications	Network Engineer	2Q2008 –	\$36,000



# Rural Healthcare Pilot Program

Budget Categories		Year 1			Year 2			Year 3			Funding
		FCI	ADHSO	FCI	ADHSO	FCI	ADHSO	FCI	ADHSO	FCI	
<b>PERSONNEL</b>		\$ 252,250	\$ 31,750	\$ 187,450	\$ 96,010	\$ -	\$ -	\$ 178,510			
Position	Person										
CIO	Stephen Clark		\$ 14,000		\$ 7,000					\$ 7,000	In Kind - 10% FTE
CTO	Douglas Potts		\$ 11,000		\$ 11,000					\$ 11,000	In Kind - 10% FTE
Project Manager	TBD	\$ 90,000		\$ 90,000							
Network Engineer	TBD	\$ 85,000		\$ 45,000	\$ 45,000			\$ 95,000			
Administrative Assistant	TBD	\$ 30,000		\$ 16,000	\$ 16,000			\$ 35,000			
Fringe Benefits (27%)		\$ 47,250	\$ 6,750	\$ 36,450	\$ 17,010	\$ -	\$ -	\$ 30,510			
<b>EQUIPMENT</b>		\$ 564,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
Network Equipment (racks, switches, routers, UPS)		\$ 184,000		\$ 250,000							
Fiber circuits		\$ 230,000									
Firewall		\$ 50,000									
Network core switch upgrade		\$ 100,000									
Application Server & Data Storage for Utility				\$ 50,000							
<b>SUPPLIES</b>		\$ 7,200	\$ 12,500	\$ 7,200	\$ 3,500	\$ -	\$ -	\$ 10,700			
Office supplies, office equipment-computers, fax, copiers, pagers, telephones			\$ 10,000		\$ 1,000			\$ 1,000	In Kind		
Marketing & Communications		\$ 7,200	\$ 2,500	\$ 7,200	\$ 2,500			\$ 9,700			
<b>OTHER</b>		\$ 207,488	\$ 12,000	\$ 357,488	\$ 12,000	\$ -	\$ -	\$ 19,488			
Data Exchange Utility				\$ 350,000							
Network Security & Monitoring		\$ 200,000									
Office Rent, utilities, and insurance (@\$1,000/month)			\$ 12,000		\$ 12,000			\$ 12,000	In Kind		
Travel		\$ 7,488		\$ 7,488				\$ 7,488			
<b>CONTRACTUAL</b>		\$ -	\$ 17,500	\$ -	\$ 35,000	\$ -	\$ -	\$ 37,500			
Position	Person										
Legal Counsel			\$ 15,000		\$ 5,000			\$ 5,000	In Kind		
Accounting			\$ 2,500		\$ 5,000			\$ 7,500	In Kind		
Interface Development					\$ 25,000			\$ 25,000	In Kind		
<b>Totals</b>		\$ 1,030,938	\$ 73,750	\$ 562,138	\$ 146,510	\$ -	\$ -	\$ 248,198	\$ 2,049,534		



### **How the telemedicine program will be coordinated throughout the region**

***Endorsement of this initiative has met with overwhelming support from the provider community. We are in the process of receiving Letters of Support which will be made available upon funding award.***

The **Albemarle Health Network Telemedicine Initiative** is a rural regional, multidisciplinary, hospital based program that will provide telemedicine services, telemedicine technology and assessment capabilities through the AHMSO in a seven county service area of northeastern North Carolina. The program will succeed in creating partnerships among a wide variety of not-for-profit agencies and for-profit practice groups and during implementation of both phases it will create a new interagency relationships throughout the region.

Albemarle Hospital, the lead agency for Albemarle Health, is a modern medical center with 182 licensed beds offers primary, community, and specialty services, and technology to provide tertiary services and provides patient education, primary cardiac evaluations, and surgical follow-up. Albemarle Hospital coordinates subspecialty clinics and most tertiary services and all catheterization and surgery take place at Albemarle Hospital.

Albemarle Health has actively supported national health IT goals through their track record in technology transfer:

- Developing seamless and secure health information exchange capabilities throughout the hospital;
- Educating and training clinicians and other healthcare stakeholders about the benefits of electronic health information; and
- Ensuring privacy protections.

It's a big challenge to coordinate this effort throughout the region, but the **Albemarle Health Network Telemedicine Initiative** can provide services more efficiently and effectively than would be possible by any one organization. Fortunately the initial members, six not-for-profit facilities, of Albemarle Health share the same understanding of the problem and associated IT solutions. Because of past working relationships, solutions presented in this application will more easily integrate within the initial member institutions. Several challenges have already been encountered in earlier IT design and implementation activities with successful outcomes:

- Adoption/adaption acceptance among existing network members during improvements of infrastructure and application; building a wireless environment; and point of service care;
- Training the constant flow of new clinics employees; and
- Speeding up the transformation from paper to electronic media.

Two challenges likely to be encountered as we add for-profit network participants who will pay their fair share of the post rollout network costs:

**1) Challenge:** Getting private providers to participate in the model. **Solution:** Making the marketing and media campaign compelling enough to maximize participation in the new network and design marketing communications

## ***Rural Healthcare Pilot Program***

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campaigns to build interest and reward participation. **Incentive:** Provide incentives to substitute their current ISP costs for a service with greater broadband speed and telemedicine capabilities, more secured networking and expanded administrative IT efficiencies.

**2) Challenge:** Poor infrastructures and complexity with network migration to new technologies. **Solution:** Vendor will provide expertise in integrating existing infrastructures and in making network migration to new technologies transparent to end users. **Incentive:** Offer “no risk” trial by running new extranet in parallel with existing network for a defined period of time; i.e., transition period.

### **Indicate to what extent the network can be self-sustaining once established**

The network can be self-sustaining with an effective provider outreach campaign that encourages substituting their current ISP costs for a service with greater broadband speed and telemedicine capabilities, more secured networking and expanded administrative IT efficiencies. A successfully engaged provider is interested in:

- Office efficiency,
- Decreased liability,
- Improved patient care and communication, and
- A clear return on investment.

While industry experts estimate that no more 16 percent of the provider practices used computers in exam rooms, a local assessment of our region shows 98+ percent of providers have some kind of computer system in place.

Albemarle Health has been aggressively demonstrating and providing education and training about the benefits of electronic health information since early 2000. The next step is to help providers make an information technology assessment for their medical practices that demonstrated return on investment.

Albemarle Health will develop an information technology seminar that will insure a practice can be reasonably sure they have made the best possible decisions. The Seminar(s) will provide a “how to approach that includes:

- Why join the broadband revolution
- What the Albemarle Health Network Telemedicine Initiative has to offer
- How to conduct a needs assessment
- Conduct research
- Develop a request for proposal (RFP)
- Conduct a return on investment analysis
- Set up vendor demonstrations
- Check referrals
- Negotiate the best deal possible for upgrades and new equipment

If all of the above steps are followed, the practice can be reasonably sure it has made the best possible decisions and will be more willing to advance their participation in a regional network.